

NOTES ON ORIENTAL SORE IN RUSSIAN TURKESTAN AND THE RESULTS OF TREATMENT WITH INJECTIONS OF TARTAR EMETIC SOLUTION

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The cases reported below seemed worthy of record on account of the rapidity with which they reacted to treatment with intravenous injections of solutions of tartar emetic, a treatment which does not seem to have been tried previously in Turkestan.

This disease is very widely spread in Russian Turkestan, and is said to be found in all the towns on the Trans-Caspian Railway from Askhabad to Tashkent. Yakimoff and Schockov (1915) described it at Askhabad, Boukhara, Samarkand and Termèze, and in the latter place it seemed especially prevalent.

Locally it is said that practically every person residing in Turkestan for five years has the marks of at least one of these sores. At Tedjen station, on casual inspection, about 50 per cent. of the people seemed to have marks of old sores on their faces, but the authors quoted above state that only 58.2 per cent. of the sores examined by them were leishmaniasis. The same authors report two cases of cutaneous leishmaniasis in dogs in Turkestan.

In all the six cases noted below *Leishmania tropica* were found. The treatment used was intravenous injections of 2 per cent. solution of antimonium tartaratum (tartar emetic) in normal saline solution; the sores received no special local treatment. Except for a little vomiting immediately after the injection, in two cases, no constitutional effects were caused by the injections.

NOTES ON THE CASES

CASE 1. Russian Nursing Sister at Kaakha, Turkestan.

History. Resident in Turkestan for some years. Duration of sores about three months.

Condition. (a) A small raised nodular sore $\frac{1}{4}$ -inch in diameter at the angle of the left jaw, with slight ulceration in the centre. (b) Three similar sores on the left forearm.

Treatment. 5.10.18. Intravenous injection of 3 c.c. T.E. solution.
7.10.18. Injection of 4 c.c. T.E. solution.

Result. On account of military operations the case was not seen again until 14.11.18, at which time all the sores were healed and the patient reported that they had all healed within three weeks after the injections.

CASE 2. Sepoy A.S.

History. Patient has been in Turkestan about three months. Duration of lesion uncertain.

Condition. Sore about $\frac{1}{2}$ -inch diameter on right hand. Warty and ulcerated.

Treatment. 19.1.19. Intravenous injection of 2 c.c. of T.E. solution.
22.1.19. Injection of 3 c.c. of T.E. solution.

Result. Completely healed by 27.1.19.

CASE 3. Sepoy M.K.

History. Had a small abrasion on the back of the left hand about 1.10.18, at Meshed, N. Persia, which gradually got bigger. He arrived in Turkestan on 10.10.18.

Condition. On 7.1.19, at Bairam Ali, Turkestan. A large sore about $1\frac{1}{2}$ inches in diameter on back of left hand with inflamed margins and a warty base. No enlarged glands or thickening of the lymphatic vessels.

Treatment. 14.1.19. Injection of 2 c.c. of T.E. solution.
16.1.19. " " 3 c.c. " "
19.1.19. " " 4 c.c. " "
22.1.19. " " 5 c.c. " "

Result. The warty growth gradually shrivelled and the ulceration disappeared. Completely healed on 28.1.19.

CASE 4. Sepoy S.S.

History. Got an abrasion of the left hand at Dushak, Turkestan, on 14.10.18, which gradually increased in size. Duration three months.

Condition. (a) A large circular lesion about $2\frac{1}{2}$ inches in diameter on back of left hand with infiltrated edges and a warty base with slight ulceration in the centre. (b) A few small non-ulcerated nodules in the adjacent skin.

Treatment. 14.1.19. Injection of 2 c.c. of T.E. solution.
16.1.19. " " 3 c.c. " "
19.1.19. " " 4 c.c. " "
21.1.19. " " 5 c.c. " "

Result. After the second injection, a firm nodule the size of a pea was discovered in a lymphatic vessel about $2\frac{1}{2}$ inches below the elbow at the back of

the left forearm, and a soft swelling about 2 inches by 1 inch on the inner side of the same forearm. This swelling was on the opposite side to that on which the injections had been given. Marked improvement was noted at the time of the third injection, the sore being dry in the centre and the warty growth shrivelling. The sore was completely healed on 29.1.19.

CASE 5. Sepoy C.D.

History. Said to be of two weeks' duration. No history of wound or abrasion. Patient has been several months in Turkestan.

Condition. At the beginning of January, 1919.

- (a) A circular lesion with thickened edges and a warty base about 1 inch in diameter on front of left wrist.
- (b) Two small nodules in the lymphatic vessels about two inches above the sore.

Treatment. 14.1.19. Injection of 2 c.c. of T.E. solution.
 16.1.19. " " 3 c.c. " "
 19.1.19. " " 4 c.c. " "
 22.1.19. " " 5 c.c. " "

Result. The warty growth rapidly shrivelled and the nodules disappeared from the lymphatics. Completely healed on 27.1.19.

CASE 6. Sepoy N.S.

History. He has been in Turkestan four months. He states that the lesions began with great itching and appeared more or less simultaneously. Duration about one month.

Condition. On 1.1.19.

- (a) On the front of the left wrist was an oval sore about 1 inch by $\frac{3}{4}$ inch, with thickened edges and a warty centre, but no ulceration.
- (b) On the front of the right forearm :
- (1) A circular lesion, 1 inch in diameter, with heaped-up and thickened edges, having an ulcer $\frac{1}{2}$ -inch in diameter in the middle with a granulating base.
 - (2) A small sore $\frac{1}{2}$ -inch in diameter, with a thickened raised edge and a minute ulcer in the centre like a boil.
 - (3) There were two small nodules in the lymphatic vessels about two inches *below* these sores, and there were no enlarged glands.

Treatment. 16.1.19. Injection of 1 c.c. of T.E. solution.
 19.1.19. " " 3 c.c. " "
 22.1.19. " " 3 c.c. " "

Result. At the time of the first injection some of the solution passed under the skin because the patient suddenly moved his arm. At the time of the second injection there was marked thickening and some inflammation at the site of the previous injection. Improvement was noticed in the sores on 22.1.19, and this was marked on 25.1.19. There was still some infiltration of the area around the point of first injection on 25.1.19, but there was no suppuration. Completely healed on 30.1.19.

These cases may be summarised as follows:—

TABLE I.

Case No.	Duration before treatment	Amount of T.E. injected	Number of injections	Duration of treatment in days	Number of days till cured.
1	3 months	cgms. 14	2	3	? 21
2	?	10	2	4	8
3	3½ months	28	4	9	14
4	3 months	28	4	9	15
5	½ month	28	4	9	13
6	1 month	14	3	7	14
Average	2.2 months	20.33	3.1	6.8	14.1

An analysis of the clinical signs in these six cases shows that Cases 2, 3, 4, 5 and 6 correspond to the 'cutaneous hypertrophic non-ulcerating papillomatous' type of da Matta's classification (1916) of the leishmaniasis, but in this type in these Turkestan cases it was found that after a certain time these warty growths tend to ulcerate in the centre. As they bleed very easily, this ulceration seems most probably due to injury followed by a secondary infection.

In Cases 1 and 6 the typical 'Oriental Sore' of the text-book was found.

In Cases 1, 4 and 6 the lesions were multiple, and in Case 6 both the papillomatous type and the typical oriental sore were found. Yakimoff and Schockov (1915) state that a single sore is commonest, but as many as seventeen may occur.

In Cases 4, 5 and 6 nodules were present in the lymphatic vessels within a few inches of the sores, those in Case 6 being remarkable in that they were distal to the lesions.

The attached table gives a comparison between the results of treatment with intravenous injections of tartar emetic solution only, in the cases reported by myself (1917), in those reported by Greig (1917) in the same year, and in the present cases.

TABLE II.

	Sinton, 1917	Greig, 1917	Sinton, 1919
Where contracted	N.W. Frontier, India and Mesopotamia	Mesopotamia	Russian Turkestan
Number of cases treated	6	18	6
Average duration of the disease before treatment	2 months	2.6 months	2.2 months
Duration of the treatment in days :—			
Average	20	...	6.8
Maximum	37	...	9
Minimum	8	...	3
Number of days from commence- ment of treatment till cured :—			
Average	28.3	28.2*	14.1
Maximum	51	52*	21 (?)
Minimum	12	16*	8
Amount of T.E. given intravenously :—			
Average	38.2 cgms.	71.5 cgms.	20.33 cgms.
Maximum	89 cgms.	150 cgms.	28 cgms.
Minimum	12 cgms.	20 cgms.	10 cgms.
Number of injections given :—			
Average	5.3	?	3
Maximum	9	?	4
Minimum	3	?	2
Result :—			
Cured	6	17	6
Not cured	0	1	0

*NOTE.—These figures are probably excessive, as they represent the 'number of days under observation in hospital.'

From this table it will be seen that the amount of tartar emetic needed to produce a cure in the Turkestan cases was only half to one-third of that needed in the other cases, and the rate of cure was almost twice as rapid.

Although it is not possible to draw any definite conclusions from so few cases, yet it would seem probable that the variety of sore found in Turkestan is more amenable to treatment with antimony than the Mesopotamian type.

I am indebted to Dr. Minkavitch, of the Russian Medical Service, for the following details of the treatment adopted for the cure of this disease by some medical practitioners in Turkestan. This treatment is a modification of the local native treatment.

A piece of Emplastrum Cantharidis is cut slightly larger than the sore; this is placed over the sore and completely covered by a larger piece of adhesive plaster to hold it in position. This dressing is renewed daily, and the blisters which have formed are opened. This treatment is continued for four days, after which the sore is treated with some simple ointment. Some very good results are said to be obtained by this treatment, but the scar left is large.

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